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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,978	06/27/2005	Yoshikatsu Ichimura	03500.017987	9533

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EXAMINER

READY, BRYAN

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/540,978

Applicant(s)

ICHIMURA ET AL.

Examiner

Bryan P. Ready

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 mos MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20061023
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7, 9-11, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Williams (US 4,205,267).

Regarding Claim 7, Williams discloses (Fig. 2) an electric potential measuring device, comprising: a support member (24,36); an oscillating body (32,34) axially supported by the support member (24,36) such that the oscillating body (32,34) oscillates about the support member (24,36); at least one detection electrode (32,34) provided on the oscillating body (32,34); means for varying a distance between the detection electrode (32,34) and an electric potential measuring object (20) disposed facing the detection electrode (32,34) by causing the oscillating body (32,34) to oscillate; and signal detecting means (44,46) connected to the detection electrode (32,34) for detecting an output signal (col. 1, lines 8-10).

Regarding Claim 9, Williams discloses the electric potential measuring device according to claim 7, wherein two detection electrodes (32,34) are disposed at positions on both sides across a central axis about which the oscillating body oscillates (*central axis not labeled in Fig. 2, Figures 3a-c show rotation about the center point of Fig. 3b.*), on the surface of the oscillating body (32,34), in order that output signals (44,46)

containing information of different phases and amplitudes appear on the detection electrodes (32,34; col. 11, lines 35-44).

Regarding Claim 10, Williams discloses the electric potential measuring device according to claim 9, wherein the signal detecting means (32,34) performs signal detection by use of a difference between the two output signals outputted from the detection electrodes (Fig. 8; col. 10, lines 5-11).

Regarding Claim 11, Williams discloses the electric potential measuring device according to claim 7, wherein a surface of the oscillating body is one of a planar surface (*elements 32 and 34 appear substantially planar in Fig. 2*), a convex spherical surface, a convex cylindrical surface whose generating line is parallel to the oscillation central axis, and a roof-shaped surface whose edge line is parallel to the oscillation central axis.

Regarding Claim 13, Williams discloses an electric potential measuring device (Fig. 2; col. 1, lines 8-10), comprising: a support member (24,36); an oscillating body (32,34) axially supported by the support member (24,36) such that the oscillating body oscillates about the support member (24,36); a pair of detection electrodes (32,34) provided on the oscillating body (32,34); and means for varying a distance between the detection electrodes and an electric potential measuring object (20) disposed facing the detection electrodes by causing the oscillating body (32,34) to oscillate, wherein the oscillating body (32,34) is caused to oscillate such that when one of the pair (32 or 34) of detection electrodes (32,34) comes close to the electric potential measuring object (20), the other one of the pair of detection electrodes (32,34) goes away from the

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electric potential measuring object (*this is evident from the geometries displayed in Figures 2 and 3; as shown in Fig. 3a, when electrode 32 is in front of opening 28, electrode 34 must be further away from the measuring object, and vice versa for electrode 34*).

Regarding Claims 14-15, the method steps thereof are met by the operation of the apparatus as disclosed by Williams as applied to claims 7, 9-11, and 13 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (US 4,205,267) in view of Werner, Jr. (US 5,212,451).

a. Williams discloses the elements as outlined in section 3 above.

b. Williams differs from the instant claimed invention in not disclosing the electric potential measuring device according to claim 7, wherein the support member is a torsion spring.

c. Werner, Jr. discloses an electric potential measuring device (Fig. 2a), wherein the support member is a torsion spring (36).

d. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to employ the torsion spring support member as disclosed by Werner Jr. with the electric potential measuring device as disclosed by Williams for the benefit of resilient torsion spring supports that provide midpoint support yet allow oscillation of the oscillating member (Werner, Jr.; col. 4, lines 48-50).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (US 4,205,267) in view of Snelling (US 4,835,461).

a. Williams discloses the elements as outlined in section 3 above. Additionally, Williams discloses an electric potential measuring device (Fig. 2) wherein a surface of the oscillating body (32,34) of the electric potential measuring device is disposed facing a surface of an electric potential measuring object (20).

b. Williams differs from the instant claimed invention in not disclosing image-forming means, wherein the image forming means controls an image forming process by using the signal detection result from the electric potential measuring device.

c. Snelling discloses image forming means (col. 1, lines 5-10) wherein the image forming means controls an image forming process by using a signal detection result from an electric potential measuring device (col. 1, lines 11-24).

d. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize the electric potential measuring device of Williams in the image forming apparatus of Snelling for the benefit of a voltmeter that has no physical contact with the surface of a photoreceptor surface, thereby preventing scratching or damage to the photoreceptor surface (Snelling, col. 1, lines 26-31; also, lines 13-18 suggest the need for voltmeters at more than one location in a xerographic process).

Conclusion

Response to Arguments

7. Applicant's arguments filed October 23, 2006 have been fully considered but they are not persuasive.

Applicants assert the Williams reference to disclose electrodes 32 and 34 to be vibrated in a plane parallel to test surface 20. Applicants suggest Williams is not seen to disclose or suggest an oscillating body axially supported by a support member such that the oscillating body oscillates about the support member.

Examiner respectfully disagrees with Applicants assessment of the Williams disclosure. Examiner asserts Williams to disclose (Fig. 2) an oscillating body (32,34) axially supported by a support member (36) such that the oscillating body (32,34) oscillates about the support member (36). Examiner asserts the disclosure of Williams may reasonably be understood to 'vibrate an oscillating body in a plane parallel to a test surface', as Applicants have interpreted, and to comprise a support member that axially supports an oscillating body such that the oscillating body oscillates about a support member. In the first interpretation, the plane is understood to be a plane parallel to the

oscillating body when the oscillating body is at equilibrium, or lies at a midway point between displacement extremes. In the second interpretation, the support member is understood to axially support an oscillating body that oscillates "about", or around, the support member, such that a locus trace, representing the oscillatory body motion in space, would be characterized by a centrode coinciding with the support member.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

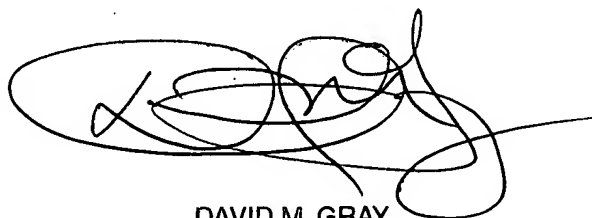
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan P. Ready whose telephone number is (571) 272-9018. The examiner can normally be reached on Mon.-Fri., 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BPR

A handwritten signature in black ink, consisting of a series of loops and flourishes, positioned above the printed name and title.

DAVID M. GRAY
SUPERVISORY PATENT EXAMINER